AMENDMENTS TO THE CLAIMS:

1.   (Currently Amended) A data switching device comprising:

an incoming stream of guaranteed throughput data;

an incoming stream of best effort data;

data switch inputs for guaranteed throughput and best effort data;

data switch outputs;

a data switch interconnecting the data switch inputs and the data switch outputs;

combined control means for controlling data scheduling of the incoming streams to the data switch such that the best effort data scheduling is based on a contention free guaranteed throughput scheduling, said combined control means comprising:

guaranteed throughput control means coupled for controlling a guaranteed throughput data scheduling to schedule the guaranteed data in one step, wherein the one step comprises at least [[a]]one of a reservation of at least one data switch input and a reservation of at least one data switch output such that no best effort data is sent to the same data switch input as the guaranteed throughput data, and

best effort control means coupled for controlling a best effort data scheduling; and

at least one guaranteed throughput input buffer selectively coupled to at least one data switch input by the combined control means, wherein the at least one guaranteed throughput input buffer is configured to store only one unit of guaranteed throughput data at a time.

2. – 3. (Canceled)

4. (Previously Presented) The data switching device according to claim 1, wherein the data switching device has one and the same output buffer both for collecting guaranteed throughput and best effort data.

5.   (Currently Amended) A data switching method, comprising:

scheduling, in one step, guaranteed throughput data for switching, wherein the one step comprises a reservation of inputs and/or outputs such that no best effort data is sent to the same data switch input as the guaranteed throughput data; and

scheduling best effort data for switching, wherein the best effort data scheduling is based on a contention free guaranteed throughput data scheduling .

6.   (Original)   The method according to claim 5, characterized in that the best effort scheduling is performed after the guaranteed throughput scheduling.

7. – 8. (Canceled)

9.   (Original)   The method according to claim 5, wherein the best effort data scheduling takes one or more multiples of three steps, including the steps: request, grant and accept.

10.   (Original)   The method according to claim 9, wherein a contention resolution for said best effort data scheduling is based on bipartite graph matching.

11.   (Currently Amended) A data switching device comprising:

a switching matrix to switch data from a plurality of inputs to a plurality of outputs;

a plurality of multiplexers coupled to the plurality of inputs of the switching matrix;

a plurality of best effort input buffers coupled as inputs to the plurality of multiplexers, each of the best effort input buffers to store best effort data;

a guaranteed throughput input buffer coupled as another input to a first multiplexer of the plurality of multiplexers, the guaranteed throughput input buffer to store guaranteed throughput data; and

combined scheduling control means coupled to the plurality of multiplexers, the combined scheduling control means comprising:

guaranteed throughput control means to schedule the guaranteed throughput data in one step, wherein the one step comprises at least [[a]]one of a reservation of at least one data switch input and a reservation of at least one data switch output such that no best effort data is sent to the same data switch input as the guaranteed throughput data, for transfer through the switching matrix to one of the plurality of outputs of the switching matrix; and

best effort control means to selectively fill said best effort input buffers with best effort data and schedule the best effort data for transfer through the switching matrix to another one of the plurality of outputs of the switching matrix, wherein best effort control means is further configured to schedule the best effort data based on a contention free guaranteed throughput scheduling.

12.   (Previously Presented)   The data switching device according to claim 11, further comprising a plurality of output buffers coupled to the plurality of outputs of the switching matrix, wherein each output buffer is configured to collect both guaranteed throughput and best effort data.

13.   (Previously Presented)   The data switching device according to claim 11, wherein the guaranteed throughput input buffer is configured to store only one unit of guaranteed throughput data at a time.

14.   (Previously Presented)   The data switching device according to claim 11, wherein the best effort control means is further configured to disable best effort requests corresponding to the input of the switching matrix to which the first multiplexer is coupled for a frame during which the guaranteed throughput data is transferred through the switching matrix.

15.   (Previously Presented)   The data switching device according to claim 11, wherein the best effort control means is further configured to disable best effort requests corresponding to the output of the switching matrix to which the guaranteed throughput data is transferred for a frame during which the guaranteed throughput data is transferred through the switching matrix.

16.   (Previously Presented)   The data switching device according to claim 11, wherein the best effort control means is further configured to schedule the best effort data after the guaranteed throughput control means schedules the guaranteed throughput data.

17. – 18.   (Canceled)

19.   (Previously Presented)   The data switching device according to claim 11, wherein the best effort control means is further configured to schedule the best effort data and in three steps, wherein the three steps comprise a request step, a grant step, and an accept step.

20.   (Previously Presented)   The data switching device according to claim 19, wherein the best effort control means is further configured to schedule the best effort data using multiples of the three steps.

21.   (Previously Presented)   The data switching device according to claim 11, further comprising a plurality of demultiplexers coupled to the plurality of best effort input buffers, wherein a first demultiplexer of the plurality of demultiplexers is also coupled to guaranteed throughput input buffer, wherein the first demultiplexer is configured to distribute data from an incoming data stream to a corresponding best effort input buffer or the guaranteed throughput input buffer.

22.   (New) The data switching device according to claim 1, wherein the best effort scheduling is performed after the guaranteed throughput scheduling.

23.   (New) The data switching device according to claim 1, wherein the best effort data scheduling takes one or more multiples of three steps, including the steps: request, grant and accept.

24.   (New) The data switching device according to claim 1, wherein a contention resolution for said best effort data scheduling is based on bipartite graph matching.

25.   (New) The data switching device according to claim 1, wherein the best effort control means is further configured to disable best effort requests corresponding to a data switch input to which a multiplexer is coupled for a frame during which the guaranteed throughput data is transferred through the data switch.

26.   (New) The data switching device according to claim 1, wherein the best effort control means is further configured to disable best effort requests corresponding to a data switch output to which the guaranteed throughput data is transferred for a frame during which the guaranteed throughput data is transferred through the data switch.